

Application Ser. No.: 10/808,889
Filing Date: March 25, 2004
Examiner: Lee, Susannah E.

Amendment Pursuant to 37 C.F.R. § 1.121(b)

IN THE SPECIFICATION:

Please replace the full paragraph at page 1, lines 19-27 with the following paragraph:

--Regulators at cell cycle checkpoints determine the decision for a cell to proceed through the cell cycle. Progression of the cell cycle is driven by cyclin-dependent kinases (CDKs) which are activated by oscillating members of the cyclin family, resulting in substrate phosphorylation and ultimately cell division. In addition, endogenous inhibitors of CDKs (INK4 family and KIP/CIP family) negatively regulate the activity of CDKs. Normal cell growth is due to a balance between activators of CDKs (cyclins) and endogenous inhibitors of ~~CDKs~~ CDKs. In several types of cancer, aberrant expression or activity of several components of the cell cycle has been described.--

Please replace the full paragraph which begins at page 1, line 28 and ends on page 2, line 9 with the following paragraph:

--Cdk4 functions in G1 phase of the cell cycle and is activated by D-type cyclins, which results in substrate phosphorylation and progression to S phase. The only known substrate for cdk4 is the retinoblastoma gene product (pRb), a major tumor suppressor gene product, which functions as a major checkpoint control in regulation of the G1/S phase transition. Hyperphosphorylation of pRb by CDKs causes the release of E2F (a family of transcription factors) bound to pRb which then activate genes necessary for cell cycle progression, e.g. thymidine kinase, thymidylate synthase, cyclin E and cyclin A. Cyclin D1 is amplified or overexpressed in many types of cancer (breast, ovarian, bladder, ~~esophageal~~ esophageal, lung, lymphoma), while the gene for p16, the endogenous inhibitor of cdk4, is deleted, mutated, or aberrantly methylated in many tumor types. A

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point of mutation in cdk4 was reported in a melanoma tumor that rendered the enzyme unable to bind p16 resulting in a constitutively active enzyme. All of the conditions described above lead to activation of cdk4 and cell cycle progression and tumor cell growth.

Please replace the full paragraph at page 2, lines 30-34 with the following paragraph:

It is known following publication of WO00/41669 that benzimidazole carbamate derivatives are vascular damaging agents that can be used for treating cancer, the ~~sulfonester~~ sulfonic acid ester derivatives claimed in this patent application are not at all exemplified and their anticancerous way of action is not described. Our invention relates specifically to ~~sulfonesters~~ carbamates of those sulfonic acid ester derivatives ~~of those carbamates.~~

Please replace the full paragraph at page 4, lines 22-27 with the following paragraph:

Among the preferred compounds of ~~formula (I)~~ formula (I) are those wherein R₂ is an aminocarbonyl group substituted by a substituent selected ~~from monoalkylamino~~ from monoalkylamino or a monoarylamino ~~substituent~~ substituent. In the preferred compounds of formula (I) are those containing for R₂ an amino substituent and preferably a monoalkylamino or a monoarylamino substituent and still more preferably those containing a monoalkylamino substituent with an acyl derivative.

Please replace the full paragraph at page 5, lines 7-13 with the following paragraph:

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The alkyl chain of the present invention includes linear, branched or cyclic chain containing 1 to 10 carbon atoms. The alkoxy chain of the present invention includes linear, ~~branched or~~ branched or cyclic chains containing 1 to 4 carbon atoms. The aryl groups include phenyl or naphthyl groups, heteroaryl groups containing one to four heteroatoms selected from S, N or O such as ~~furyl, thiophen, isoxazole, oxazole, pyrazole, furane, pyridine~~ furanyl, thiophenyl, isoxazolyl, oxazolyl, pyrazolyl and pyridinyl. The heterocyclyl group contains one to four heteroatoms ~~chosen~~ chosen from N, O, S and 2 to 6 carbon atoms.

Please replace the full paragraph at page 5, lines 14-17 with the following paragraph:

Among the preferred compounds are those containing an alkyl chain 1 to 10 carbon atoms and those containing ~~acycloalkyl~~ a cycloalkyl chain 3 to 5 carbon atoms. When the alkyl chain is substituted by an alkoxy group this last group has preferably one carbon atom.